



SEQUENCE LISTING

<110> E. I. du Pont de Nemours and Company

<120> Plant Viral Movement Protein Genes

<130> BB1344

<140>

<141>

<150> 60/128,092

<151> 1999-04-07

<160> 56

<170> Microsoft Office 97

<210> 1

<211> 450

<212> DNA

<213> Vitis sp.

<220>

<221> unsure

<222> (445)

<400> 1

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tttctctgta acatggatcc ttatgttggt ctcacttgcc gcaactcagga gcagaaaagc 180
agtgttgcac caggaaaagg gtctgaccca gaatggaatg aacattttgt attcaccata 240
tctgaaggca tctcagaact caccattaaa ataatggaca gtgatagcgg tagtggtgat 300
gattttgtgg gagaagcaac cattccacta gaggcactct tcacggaagg aagcctggag 360
ccaagcaccg gtacaatgtt gttaaagacc aaggaatatt gtggagagat taaagttggc 420
ctcactttca ctcaaaaggg aaaangtgat 450
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<210> 2

<211> 130

<212> PRT

<213> Vitis sp.

<220>

<221> UNSURE

<222> (129)

<400> 2

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      20              25              30
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Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Ser
      35              40              45
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Asp Pro Glu Trp Asn Glu His Phe Val Phe Thr Ile Ser Glu Gly Ile
      50              55              60
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Ser Glu Leu Thr Ile Lys Ile Met Asp Ser Asp Ser Gly Ser Gly Asp
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65		70		75		80
Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Leu Phe Thr Glu						
	85			90		95
Gly Ser Leu Glu Pro Ser Thr Gly Thr Met Leu Leu Lys Thr Lys Glu						
	100		105		110	
Tyr Cys Gly Glu Ile Lys Val Gly Leu Thr Phe Thr Gln Lys Gly Lys						
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Xaa Asp						
130						

<210> 3
 <211> 916
 <212> DNA
 <213> Zea mays

<400> 3

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ggcgagttgg	gttgggtcta	tctcgcaatc	gaggcgtttt	ttttctgctt	cgtaagttcg	180
tggtcgatcc	agcgagcgag	cgagcagacc	ggcggctaac	cgcgaggga	gagatggcgc	240
aggggacgct	ggaggtgctt	ctcgtcggag	ccaggggcct	cgagaacacc	gattacctga	300
gcaacatgga	cccctacgcg	cttctgcaat	gtcgtcccca	cgagcagaag	agcagcgctcg	360
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gcgcagcaga	gctgttcac	aagctcctgg	acagtgcagg	tggcactgat	gacgattttg	480
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ctccagagga	ccagggcttc	tgaggaataa	cttggcgtgt	ggccgctgga	actggaggca	660
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gtactgcac	actctaaagc	ctagctaaaa	ccaccagctc	ctgtacttga	tgccgggcgg	840
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<210> 4
 <211> 129
 <212> PRT
 <213> Zea mays

<400> 4

Met Ala Gln Gly Thr Leu Glu Val Leu Leu Val Gly Ala Arg Gly Leu											
1				5			10				15
Glu Asn Thr Asp Tyr Leu Ser Asn Met Asp Pro Tyr Ala Leu Leu Gln											
	20					25				30	
Cys Arg Ser His Glu Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Cys											
	35					40				45	
Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Asp Gly Ala											
	50					55				60	
Ala Glu Leu Phe Ile Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp											
	65				70			75			80
Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Val Tyr Thr Glu											
	85						90				95

Gly Asn Ile Pro Pro Thr Val Tyr Asn Val Val Lys Asp Glu Glu Tyr
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Arg Gly Glu Ile Lys Val Gly Leu Thr Phe Thr Pro Glu Asp Gln Gly
 115 120 125

Phe

<210> 5
 <211> 876
 <212> DNA
 <213> Zea mays

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 gcagaagagc agtattgcaa ctggaaaagg aactaccctt gagtggaatg aaaactttat 240
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 gagcattcca ccaacactct ataatgttgt gaaaggtgaa aaatactgcg gggaaatcaa 420
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 tttggcttct tttgattgtt tcagaagaag tgttattagt gagtttcaac aaaaaatagc 660
 tccatattgc tctatatccc gtattggaaa ttctaaggcc gtttgtgatt actgcttaca 720
 acaagaagtt ttgcttctag ttcccactac gctttttttt gaagttttga gtggaacatc 780
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<210> 6
 <211> 143
 <212> PRT
 <213> Zea mays

<400> 6
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Glu Asn Thr Asp Tyr Leu Cys Asn Met Asp Pro Tyr Ala Ile Leu Lys
 20 25 30

Cys Arg Ser Gln Glu Gln Lys Ser Ser Ile Ala Thr Gly Lys Gly Thr
 35 40 45

Thr Pro Glu Trp Asn Glu Asn Phe Ile Phe Thr Val Ser Asp Arg Thr
 50 55 60

Thr Asp Leu Val Ile Lys Leu Met Asp Ser Asp Thr Gly Thr Ala Asp
 65 70 75 80

Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Val Tyr Thr Glu
 85 90 95

Arg Ser Ile Pro Pro Thr Leu Tyr Asn Val Val Lys Gly Glu Lys Tyr
 100 105 110

Cys Gly Glu Ile Lys Val Gly Leu Thr Phe Thr Pro Glu Asp Thr Arg

115

120

125

Gln Arg Gly Leu Pro Glu Asp Phe Gly Gly Trp Lys Gln Ser Ser
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<210> 7
 <211> 771
 <212> DNA
 <213> Hevea brasiliensis

<220>
 <221> unsure
 <222> (671)

<220>
 <221> unsure
 <222> (721)

<220>
 <221> unsure
 <222> (752)

<220>
 <221> unsure
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<220>
 <221> unsure
 <222> (769)

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 ttaagtcttt tctttttcgc tttttggatt caattctggt ccaaaaatgc ctctaggaac 180
 tggtgaagtc ctacttggtg gtgctaaggg tcttgaaaac actgattttc tcaatggcgt 240
 ggacccttat gtgctcctcg cttgcggtac ccaggagcag aaaagcagtg ttgcttcagg 300
 gaaagggagt gaaccagaat ggaatgagaa attctcattt gaggtatcag atggtgacac 360
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 agcaaccatt ccccttgagc cattgttttt ggaaggaaac ctcccatcta cggcgtacaa 480
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 ggtagagatg gacaacgtcg gagtggatgg atacgatttt cggttataat attaaactagc 600
 atcttggtgt ggaaatggca aggactgctt ttggtttggg gatggcaaaa gagactccgt 660
 ttttaacgtc natgttggtt ttgaaaactt ggtttttgat gtttgcaaaa aatacccgat 720
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<210> 8
 <211> 140
 <212> PRT
 <213> Hevea brasiliensis

<400> 8
Met Pro Leu Gly Thr Val Glu Val Leu Leu Val Gly Ala Lys Gly Leu
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20 25 30
Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Ser
35 40 45
Glu Pro Glu Trp Asn Glu Lys Phe Ser Phe Glu Val Ser Asp Gly Asp
50 55 60
Thr Glu Leu Thr Leu Lys Ile Met Asp Ser Asp Val Gly Ala Ala Asp
65 70 75 80
Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Pro Leu Phe Leu Glu
85 90 95
Gly Asn Leu Pro Ser Thr Ala Tyr Lys Val Val Lys Glu Gln Glu Tyr
100 105 110
Lys Gly Glu Ile Thr Val Gly Leu Thr Phe Thr Pro Glu Val Glu Met
115 120 125
Asp Asn Val Gly Val Asp Gly Tyr Asp Phe Arg Leu
130 135 140

<210> 9
<211> 874
<212> DNA
<213> Triticum aestivum

<400> 9
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catataattc ctgatcgagc gagcgggaga ggaaggcgag atcaggcccg gagagaagat 180
ggcgcagggg acgctggagg tgctgctcgt gggagccaag ggctcgcaga acaccgacta 240
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cgctgcctct ggaaagggaa gtgatcctga gtggaacgaa accttttgtt tcaccgtctc 360
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cagcgttggt gaagcaacga tccatttga tggagtgtac actgaaggaa gcattcccacc 480
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tggaataagct acgaatctac ttattgattg gtatcgtttt ctaatattca aatttgtaat 780
aacagtgttc ccacttgta tgaagtatga gcctctttaa tgtcactaaa ctgagttgca 840
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 874

<210> 10
<211> 144
<212> PRT
<213> Triticum aestivum

<400> 10
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 20 25 30
 Cys Thr Ser Gln Glu Gln Lys Ser Thr Val Ala Ser Gly Lys Gly Ser
 35 40 45
 Asp Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Glu Asn Ala
 50 55 60
 Thr Glu Leu Val Ile Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp
 65 70 75 80
 Asp Ser Val Gly Glu Ala Thr Ile Pro Leu Asp Gly Val Tyr Thr Glu
 85 90 95
 Gly Ser Ile Pro Pro Thr Val Tyr Asn Val Val Lys Asp Glu Glu Tyr
 100 105 110
 Arg Gly Glu Ile Lys Ile Gly Leu Thr Phe Thr Pro Glu Glu Ala Arg
 115 120 125
 Asp Gln Asp Gln Pro Glu Glu Asn Tyr Gly Gly Trp Asn Gln Ser Ser
 130 135 140

<210> 11
 <211> 1482
 <212> DNA
 <213> Oryza sativa

<400> 11
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 ggtgcaggaa gctgagggaac acggagttct tcacgcgcca ggatccctac gtctgcatcg 180
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 ggaacagcaa cacgctcacc catgatgatt tcattggcaa tggcagggtg cagctgcata 360
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 ctgctgggga agtgacgctc attatgcatt ttgatgtttc agcaatgaag aacaagccgg 480
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 catatgctgc cccctcacct tcatacgcac taccctctgc aggataccct gcagtaaccg 600
 catatcaatc ctatcctgct agccatgtcc cggcgccata tctacttca gcatacccac 660
 atccaccacc atctctgcta gctcgcatg ttgagcatgc ggcataccct cctacaagta 720
 caacatatcc tccacagccg taccaccac agccgcaggg acaaacatac ccacgcagc 780
 cgcagggaga aacataccaa ccgcagccgc agcgagaaac ataccacccg cagcctcaag 840
 tacaaccata cccaccaaag ccacagggac aaccataccc accgcagccg cagggacaac 900
 catatccacc gcaaccatat ggacaaactt acccaccacc tccaaaagga cagcccacat 960
 atccacctgc gccctatcct tcaacttacc caccagcacc atattgatat ggcacacttg 1020
 gtggactgaa gttgtccaca taaaaagca agtaagcaac aagtgatgat cagttottat 1080
 atttatccag ggtatccagc ctcatcacc cagttaattg aaacaaatga aatcattcct 1140
 gaagcgattc atgtcaacat cttagcaacc aatggtagta gttaccatct ggtatgtatc 1200
 atatatcata gcttgcagaa tgtcaogaat ggaatttggt cgattatggt gtatgttttg 1260
 ggcttgttgt aacagtgatc cacctttggt ctgttttgag gtcattgttg gctgttctgt 1320
 gactgtaact actgcttttt acaaaggggg gaagcagtaa ttctagttct acctgcaact 1380
 gcctgataag tgttaactgt gaaaagttgc agtagcttgt cgactttgta ccatgttgtt 1440
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<210> 12
 <211> 308
 <212> PRT
 <213> Oryza sativa

<400> 12

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Lys	Leu	Arg	Asp	Thr	Glu	Phe	Phe	Thr	Arg	Gln	Asp	Pro	Tyr	Val	Cys
			20					25					30		
Ile	Glu	Tyr	Ala	Thr	Asn	Lys	Phe	Arg	Thr	Arg	Thr	Cys	Thr	Asp	Gly
		35					40					45			
Gly	Arg	Asn	Pro	Thr	Phe	Asp	Glu	Lys	Phe	His	Ile	Pro	Leu	Ile	Glu
	50					55					60				
Gly	Leu	Arg	Glu	Leu	Thr	Val	Thr	Val	Trp	Asn	Ser	Asn	Thr	Leu	Thr
65					70				75						80
His	Asp	Asp	Phe	Ile	Gly	Asn	Gly	Arg	Val	Gln	Leu	His	Lys	Val	Leu
				85					90					95	
Thr	Arg	Gly	Tyr	Asp	Asp	Ala	Ser	Trp	Pro	Leu	Gln	Thr	Arg	His	Met
			100					105					110		
Arg	Ser	Ala	Gly	Glu	Val	Thr	Leu	Ile	Met	His	Phe	Asp	Val	Ser	Ala
		115					120					125			
Met	Lys	Asn	Lys	Pro	Gly	Lys	Ile	Ser	Ala	Ala	Ser	Thr	Thr	His	Ser
	130					135					140				
Val	Leu	Pro	Val	Pro	Val	Pro	Ala	Val	Pro	Tyr	Ala	Ala	Pro	Ser	Pro
145					150					155					160
Ser	Tyr	Ala	Leu	Pro	Pro	Ala	Gly	Tyr	Pro	Ala	Val	Pro	Pro	Tyr	Gln
				165					170					175	
Ser	Tyr	Pro	Ala	Ser	His	Val	Pro	Ala	Pro	Tyr	Pro	Thr	Ser	Ala	Tyr
			180					185					190		
Pro	His	Pro	Pro	Pro	Ser	Leu	Leu	Ala	Arg	Asp	Val	Glu	His	Ala	Ala
		195					200					205			
Tyr	Pro	Pro	Thr	Ser	Thr	Thr	Tyr	Pro	Pro	Gln	Pro	Tyr	Pro	Pro	Gln
	210					215					220				
Pro	Gln	Gly	Gln	Thr	Tyr	Pro	Pro	Gln	Pro	Gln	Gly	Glu	Thr	Tyr	Gln
225					230					235					240
Pro	Gln	Pro	Gln	Arg	Glu	Thr	Tyr	Pro	Pro	Gln	Pro	Gln	Val	Gln	Pro
				245					250					255	
Tyr	Pro	Pro	Lys	Pro	Gln	Gly	Gln	Pro	Tyr	Pro	Pro	Gln	Pro	Gln	Gly
			260					265					270		
Gln	Pro	Tyr	Pro	Pro	Gln	Pro	Tyr	Gly	Gln	Thr	Tyr	Pro	Pro	Pro	Pro
		275					280					285			
Lys	Gly	Gln	Pro	Thr	Tyr	Pro	Pro	Ala	Pro	Tyr	Pro	Ser	Thr	Tyr	Pro
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Pro Ala Pro Tyr
305

<210> 13
<211> 1172
<212> DNA
<213> Glycine max

<400> 13
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ggttacgggtg gtttcgtgct ccaagttgaa ggacacagaa tggatttcaa gacaagatcc 180
gtacgtttgt gttgagtatg gcagcacaaa gttccgaacc agaacctgca cagacggcgg 240
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caatgtcctt gtttggaaca gcaatactct caccttcgac gattttatag gaagcggaaa 360
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cccaccacca ccatcacctc cctctgcaac tccttaccat acaactggat cttattctta 660
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attaaagggc accatttttt ttttcgcaat tggatgttca ctgaccattt tccgggtttc 1080
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aaaaaaaaac aaaaaaaaaa aaaaaaaaaa aa 1172

<210> 14
<211> 258
<212> PRT
<213> Glycine max

<400> 14
Met Ser Ser Ile Thr Gly Ile Gln Gly Gln Pro Leu Glu Val Thr Val
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20 25 30
Pro Tyr Val Cys Val Glu Tyr Gly Ser Thr Lys Phe Arg Thr Arg Thr
35 40 45
Cys Thr Asp Gly Gly Lys Asn Pro Val Phe Gln Glu Lys Phe Ile Phe
50 55 60
Pro Leu Ile Glu Gly Leu Arg Glu Leu Asn Val Leu Val Trp Asn Ser
65 70 75 80
Asn Thr Leu Thr Phe Asp Asp Phe Ile Gly Ser Gly Lys Ile Gln Leu
85 90 95
His Lys Val Leu Ser Gln Gly Phe Asp Asp Ser Ala Trp Pro Leu Gln
100 105 110
Thr Lys Thr Gly Arg Tyr Ala Gly Glu Val Lys Val Ile Leu His Tyr
115 120 125

Ala Ile Ala Asn Gln Arg His Lys Leu Val Ser Gly His Ala Pro Ser
130 135 140

Ala Pro Pro Tyr Val Ala Thr Ala Thr Pro Pro Val Pro Ser Ser Tyr
145 150 155 160

Ser Thr Ser Tyr Pro Pro Pro Pro Ser Ala Thr Ser Tyr Pro Pro Pro
165 170 175

Pro Ser Pro Pro Ser Ala Thr Pro Tyr His Thr Thr Gly Ser Tyr Ser
180 185 190

Tyr Pro Pro Pro Pro Pro Pro Pro Thr Ala Tyr Pro Pro Tyr Ser Ser
195 200 205

His Ser Ser Pro Tyr Pro Pro Ser Ser Tyr Pro Pro Gln Pro Ser Ser
210 215 220

Tyr Pro Pro Pro Pro Pro Pro Ser Ser Tyr Pro Pro Ala Ser Ala Tyr
225 230 235 240

Pro Tyr Pro Pro Pro Ala Gly Tyr Pro Ser Gly Ile Tyr Pro Pro Pro
245 250 255

Pro Tyr

<210> 15
<211> 757
<212> DNA
<213> Zea mays

<400> 15
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aggcgctcct gaagggtcac ctcgctgcag ccaaggggct ctccggcaac gatttcttag 180
ggaagctgga cccctacgtg atcatgcagt accggagcca ggagcgcaag agcagcgctc 240
cccagacca aggaaggaac ccgtgctgga acgaggtgtt caagttccag atcaactcgg 300
ccgcggccaa cgtgcagcac aagctcatcc tccggatcat ggaccacgac aacttctcca 360
gcgacgactt cctcggcgag gcgacgatcg acgtgacgga catcgtcagc ctgggcgcgc 420
agcgcggcac gtaccacctc aacgcggcca agcacaacgt ggtcctcgcc gacaagacgt 480
accacggcga gatcaaggtc gccatcacct tcacctccac ccagaccag gttcaggaag 540
atggaggagc aattggagga tggaggcaca gtacgtttta tcagtgaag tgataggcgt 600
cgtggactct ctcaagttct ttggttgctt ggtggtgtt cgggttgat gtagtttttg 660
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aaccaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaag 757

<210> 16
<211> 157
<212> PRT
<213> Zea mays

<400> 16
Met Gly Lys Gly Val Leu Lys Val His Leu Val Asp Ala Lys Gly Leu
1 5 10 15

Ser Gly Asn Asp Phe Leu Gly Lys Leu Asp Pro Tyr Val Ile Met Gln
20 25 30

Tyr Arg Ser Gln Glu Arg Lys Ser Ser Val Ala Arg Asp Gln Gly Arg
 35 40 45
 Asn Pro Cys Trp Asn Glu Val Phe Lys Phe Gln Ile Asn Ser Ala Ala
 50 55 60
 Ala Asn Val Gln His Lys Leu Ile Leu Arg Ile Met Asp His Asp Asn
 65 70 75 80
 Phe Ser Ser Asp Asp Phe Leu Gly Glu Ala Thr Ile Asp Val Thr Asp
 85 90 95
 Ile Val Ser Leu Gly Ala Glu Arg Gly Thr Tyr His Leu Asn Ala Ala
 100 105 110
 Lys His Asn Val Val Leu Ala Asp Lys Thr Tyr His Gly Glu Ile Lys
 115 120 125
 Val Ala Ile Thr Phe Thr Ser Thr Gln Thr Gln Val Gln Glu Asp Gly
 130 135 140
 Gly Ala Ile Gly Gly Trp Arg His Ser Ser Phe Asn Gln
 145 150 155

<210> 17
 <211> 422
 <212> DNA
 <213> Hevea brasiliensis

<220>
 <221> unsure
 <222> (410)

<220>
 <221> unsure
 <222> (415)

<400> 17
 tcccaatcca cttgctcatt tcccttaagc tctatatata cctttagaaa tttcttcttc 60
 ttgatctcca gaggtgtctt attcaatcct aaagcaagat tcaagaaacg gagatggcta 120
 ctgggctatt ggaagtgcag ctggtgaatg caaaaggcct cagaggcact gatttcottag 180
 gtaagattga tccatatgtt atcgtgaagt acaaaaacca agagcgcgag agcagtgtcg 240
 ccagaggtca aggtgggaat ccagtgtgga atgagaaact cacattcaag gtggaatatc 300
 cagggcaagg tgaagagtac aagctcattt taaaaatcat ggacaaggac accttctctg 360
 ctgatgattt gcttgggcca tgctacgata tatgtgaagg atttggtggn attangaatg 420
 ga 422

<210> 18
 <211> 102
 <212> PRT
 <213> Hevea brasiliensis

<220>
 <221> UNSURE
 <222> (99)

<220>
 <221> UNSURE
 <222> (101)

<400> 18
Met Ala Thr Gly Leu Leu Glu Val Gln Leu Val Asn Ala Lys Gly Leu
1 5 10 15
Arg Gly Thr Asp Phe Leu Gly Lys Ile Asp Pro Tyr Val Ile Val Lys
20 25 30
Tyr Lys Asn Gln Glu Arg Glu Ser Ser Val Ala Arg Gly Gln Gly Gly
35 40 45
Asn Pro Val Trp Asn Glu Lys Leu Thr Phe Lys Val Glu Tyr Pro Gly
50 55 60
Gln Gly Glu Glu Tyr Lys Leu Ile Leu Lys Ile Met Asp Lys Asp Thr
65 70 75 80
Phe Ser Ala Asp Asp Leu Leu Gly His Ala Thr Ile Tyr Val Lys Asp
85 90 95
Leu Leu Xaa Leu Xaa Met
100

<210> 19
<211> 486
<212> DNA
<213> Glycine max

<220>
<221> unsure
<222> (430)

<220>
<221> unsure
<222> (464)

<220>
<221> unsure
<222> (486)

<400> 19
agaagaatag aatcttcaga gacatggcaa ttgggttcat ggaggtgcag cttgtgaaag 60
caaaaggcct gcgagacact gatatctttg gtaaaatgga tccctatgtt ctgatacaat 120
acaaaggcca agagaagagg agtgggtgtcg ctaatggcaa aggcaaaaat ccggtatgga 180
atgagaaatt tatcttcaaa gtagaatatc ctggatcaag caatcaacac aagtcacatc 240
tcaaaattat ggataaagac ttatatacag acgacttcgt cggagaagca ataatccatg 300
taggggattt attggcccaa ggagtagaga acggaggagc caaattacag actctcaagt 360
atagagtggg tcgtgctaac aagtcttatt gtgggtgaaat tgatgttggg tgttactttt 420
accccgaan gtgggaagac aaattttgtg ggaagaagac atangaggat ggaaaagaaa 480
gtgacn 486

<210> 20
<211> 154
<212> PRT
<213> Glycine max

<220>
<221> UNSURE
<222> (136)

<220>
 <221> UNSURE
 <222> (147)

 <400> 20
 Met Ala Ile Gly Phe Met Glu Val Gln Leu Val Lys Ala Lys Gly Leu
 1 5 10 15
 Arg Asp Thr Asp Ile Phe Gly Lys Met Asp Pro Tyr Val Leu Ile Gln
 20 25 30
 Tyr Lys Gly Gln Glu Lys Arg Ser Gly Val Ala Asn Gly Lys Gly Lys
 35 40 45
 Asn Pro Val Trp Asn Glu Lys Phe Ile Phe Lys Val Glu Tyr Pro Gly
 50 55 60
 Ser Ser Asn Gln His Lys Leu Ile Leu Lys Ile Met Asp Lys Asp Leu
 65 70 75 80
 Tyr Thr Asp Asp Phe Val Gly Glu Ala Ile Ile His Val Gly Asp Leu
 85 90 95
 Leu Ala Gln Gly Val Glu Asn Gly Gly Ala Lys Leu Gln Thr Leu Lys
 100 105 110
 Tyr Arg Val Val Arg Ala Asn Lys Ser Tyr Cys Gly Glu Ile Asp Val
 115 120 125
 Gly Cys Tyr Phe Tyr Pro Glu Xaa Trp Glu Asp Lys Phe Cys Gly Lys
 130 135 140
 Lys Thr Xaa Glu Asp Gly Lys Glu Ser Asp
 145 150

<210> 21
 <211> 862
 <212> DNA
 <213> Glycine max

<400> 21
 ttattagaca ttaaattgta agaattttgc tgacttgtaa gcttcagaga cgaagacaca 60
 cggtttagagt gagaaagaga tggcaattgg gttcatggag gtgcagcttg tgaaagcaaa 120
 ggagttgtgt gacactgatt tctttggtag tatggaccgg tatgttgtga tacaatacaa 180
 cggccaagag caaaggagta gtgttgctaa gggacagggc aataatccgg tatggaatga 240
 gaaatttgtg ttcaaggtag aatatactac actgagtaat tcatacaaga ttatcttaaa 300
 aatcatggac aaggatcttt tatctgcaga tgactttggt ggtcaagcca tagtctatgt 360
 ggaagattta ttagccatag gggtagagga tggtagcggt gagctacaac ctctaaagta 420
 cagagtaatt cgtgcagatc aatcttattg tggagaaatt gatotttggt taacttttaa 480
 ggtggaagaa gagttcaatg gagaagctaa acgaggatcg aaggacagta aatagtattt 540
 gcaatagcag ttggccaaca tgaatatcaa ttgatttcaa tggagatttt ggaatcatca 600
 tcatgtagtt agtttcatct ttttagttgt atatgatcct tttggaaagt aggatcaatg 660
 catagataaa tttactaaat tttatgccat caaattagta atagtatgca ttattaatct 720
 tctaatttat cttcaccata attaatctca ttgatgattc aatcttgtag ttccttaaca 780
 tctatatact atatgggttt gaacctttta aaaaaaagaa aaaaaaaaaa aaaaaaaaaa 840
 aaaaaaaaaa aaaaaaaaaa aa 862

<210> 22
 <211> 151

<212> PRT
 <213> Glycine max

<400> 22

Met Ala Ile Gly Phe Met Glu Val Gln Leu Val Lys Ala Lys Glu Leu
 1 5 10 15

Cys Asp Thr Asp Phe Phe Gly Ser Met Asp Pro Tyr Val Val Ile Gln
 20 25 30

Tyr Asn Gly Gln Glu Gln Arg Ser Ser Val Ala Lys Gly Gln Gly Asn
 35 40 45

Asn Pro Val Trp Asn Glu Lys Phe Val Phe Lys Val Glu Tyr Pro Thr
 50 55 60

Leu Ser Asn Ser Tyr Lys Ile Ile Leu Lys Ile Met Asp Lys Asp Leu
 65 70 75 80

Leu Ser Ala Asp Asp Phe Val Gly Gln Ala Ile Val Tyr Val Glu Asp
 85 90 95

Leu Leu Ala Ile Gly Val Glu Asp Gly Ala Ala Glu Leu Gln Pro Leu
 100 105 110

Lys Tyr Arg Val Ile Arg Ala Asp Gln Ser Tyr Cys Gly Glu Ile Asp
 115 120 125

Leu Gly Ile Thr Phe Lys Val Glu Glu Glu Phe Asn Gly Glu Ala Lys
 130 135 140

Arg Gly Ser Lys Asp Ser Lys
 145 150

<210> 23

<211> 860

<212> DNA

<213> Triticum aestivum

<400> 23

tccaaacgcg acctcatcag agcaagaccc ggaggaaaca aggagaggcc agagcggcct 60
 gtcacaaggc aaaggacaga ggagggtgctt gttcagggtct cctgctagat cggaggcgga 120
 tgggcagggg cgtgctggag gtgcatctcg tcgacgccaa gggcctcttc ggcagcgatt 180
 tcctagggaa gatcgaccg tatgtaatcg tgcaataccg gagccaggag cgcaagagca 240
 gcacctccag agatgagggg aggaaccgga gctggaacga ggtgttcggg ttccagatca 300
 actcctctgc ggccaacggg cagcacaagc tcttcctcgg gatcatggac caccgacaact 360
 tctccagcga cgacttcctc ggccaagcga cgatcaacgt gaccgatctg atcagcaccg 420
 gcatggagag cggcgcgctc cagctgaacg cggcaaagta cagcgttgtg tccgctgata 480
 actcatacca cggcgagatc agagtagggc tcacgttcac cgccaccaag gttgaagaag 540
 acggagggca ggtcggaggc tggacgcaca gctctcgca gtagagcatg taacgtcctt 600
 gcccttcgct cgtagcttta gtgttgatg ctatgatgtc cgtgactgaa tgatgtgatt 660
 ccaagtgtat gtacgttgca cctgtagtag ctttttagaa gatgtatatg tactagtagc 720
 cagaagtcag aactcgtagc aggctagagg cgtcaattcc gttaattaat tgtcgatttg 780
 tggttcttat tttaggggga attgtgattc tggatgcgaa caccaaaaaa aaaaaaaaaa 840
 aaaaaaaaaa aaaaaaaaaa 860

<210> 24

<211> 154

<212> PRT

<213> Triticum aestivum

<400> 24
Met Gly Arg Gly Val Leu Glu Val His Leu Val Asp Ala Lys Gly Leu
1 5 10 15
Phe Gly Ser Asp Phe Leu Gly Lys Ile Asp Pro Tyr Val Ile Val Gln
20 25 30
Tyr Arg Ser Gln Glu Arg Lys Ser Ser Thr Ser Arg Asp Glu Gly Arg
35 40 45
Asn Pro Ser Trp Asn Glu Val Phe Arg Phe Gln Ile Asn Ser Ser Ala
50 55 60
Ala Asn Gly Gln His Lys Leu Phe Leu Arg Ile Met Asp His Asp Asn
65 70 75 80
Phe Ser Ser Asp Asp Phe Leu Gly Gln Ala Thr Ile Asn Val Thr Asp
85 90 95
Leu Ile Ser Thr Gly Met Glu Ser Gly Ala Ser Gln Leu Asn Ala Ala
100 105 110
Lys Tyr Ser Val Val Ser Ala Asp Asn Ser Tyr His Gly Glu Ile Arg
115 120 125
Val Gly Leu Thr Phe Thr Ala Thr Lys Val Glu Glu Asp Gly Gly Gln
130 135 140
Val Gly Gly Trp Thr His Ser Ser Arg Glu
145 150

<210> 25
<211> 914
<212> DNA
<213> Oryza sativa

<400> 25
cttttggaag aaaagatcac ccaaaaccct atattccata gttgagacac aagatttttt 60
gaagccaagt ttgcgcattha catcaaaggg ttcttttgat gogaccaatg ctgtgaagag 120
tgtaactagc agtatctcta gcgcttcagg gaagcatgtc gctgacgata caagagaatt 180
tggttgagag ctgaacatta cagtggtaag aggtattcag ttggccgtca gagacatgct 240
aacgagcgat ccatatgttg ttctaacact tggggagcag aaagctcaaa ccaactgttaa 300
accgagtgcac ttgaaccacg tatggaatga ggtgcttaag atatcaattc ctcgaaatta 360
tggaacctct aaacttgaag tatacgacca tgatacgttc tctgctgatg atatcatggg 420
ggaagcggag atagatcttc aaccaatgat cacagccgtc atggcctttg gagatccctc 480
gcgtgttggt gacatgcaaa ttggaagggt gttcatgacc aaagacaatg ccctggtgaa 540
agatagcact gtcaatgttg tgcggggcaa ggtaaaacag gaagtgcacc taaagttgca 600
gaatgtagaa tcaggtgaga tggagttaga actggaatgg gttccaatac cctagattaa 660
taaagctcga ttggttctct gccaaaaaaa attactcaag aagcgtcagt tttgtaattt 720
aatgaatgg cttcaaattc cgtgtactta ctgaatctct gtcttcaaca ttttggccac 780
ccgaacgaaa ttcgtaaaaa tgccattgta aaatatcatg ttgtaatccg tcggctgcac 840
tcacgaccaa ttatattatt ctttagtgaa gtgtgctttc aaccggtgt cataaaaaaa 900
aaaaaaaaaa aaaa 914

<210> 26
<211> 217
<212> PRT
<213> Oryza sativa

<400> 26

Phe Trp Lys Lys Arg Ser Pro Lys Thr Leu Tyr Ser Ile Val Glu Thr
1 5 10 15

Gln Asp Phe Leu Lys Pro Ser Leu Arg Ile Thr Ser Lys Gly Ser Phe
20 25 30

Asp Ala Thr Asn Ala Val Lys Ser Val Thr Ser Ser Ile Ser Ser Ala
35 40 45

Ser Gly Lys His Val Ala Asp Asp Thr Arg Glu Phe Val Gly Glu Leu
50 55 60

Asn Ile Thr Val Val Arg Gly Ile Gln Leu Ala Val Arg Asp Met Leu
65 70 75 80

Thr Ser Asp Pro Tyr Val Val Leu Thr Leu Gly Glu Gln Lys Ala Gln
85 90 95

Thr Thr Val Lys Pro Ser Asp Leu Asn Pro Val Trp Asn Glu Val Leu
100 105 110

Lys Ile Ser Ile Pro Arg Asn Tyr Gly Pro Leu Lys Leu Glu Val Tyr
115 120 125

Asp His Asp Thr Phe Ser Ala Asp Asp Ile Met Gly Glu Ala Glu Ile
130 135 140

Asp Leu Gln Pro Met Ile Thr Ala Val Met Ala Phe Gly Asp Pro Ser
145 150 155 160

Arg Val Gly Asp Met Gln Ile Gly Arg Trp Phe Met Thr Lys Asp Asn
165 170 175

Ala Leu Val Lys Asp Ser Thr Val Asn Val Val Ser Gly Lys Val Lys
180 185 190

Gln Glu Val His Leu Lys Leu Gln Asn Val Glu Ser Gly Glu Met Glu
195 200 205

Leu Glu Leu Glu Trp Val Pro Ile Pro
210 215

<210> 27

<211> 770

<212> DNA

<213> Oryza sativa

<400> 27

ccacgcgtcc ggcctgtgca acatcatcat caagaagaag aagagatcaa cggcaagaag 60
actagcgact agcgagagat cgatcgaaga gaagaggaga gatggtgcac gggagagctgg 120
aggctcctcct cgtctgcgcc aagggcctcg aggacactga cttcttgaac gacatggacc 180
cctacgtgat cctcacctgc cgcactcagg agcagaaaag cagcgttgca aaaggagcag 240
gaagcgagcc tgaatggaac gagaccttcg tcttcaccgt ctccgacgat gttccacagc 300
tcaatgtcaa gatcatggac agtcatgcct tctcagctga cgatttcgtc ggtgaagcaa 360
acattcctct ggagcctgtg ttcoctggaag gcagccttcc tccagccgtc caccgtgtcg 420
tcaaggagga gaagtactgt ggagagatca aggttgctct caccttcaact ccagcagcgg 480
aaactcgcca tcatcacaac caccgagaac aggggggaggg ttacagcagc tggaaactgat 540
tgctgtctac taatgagcat caacgagagg agatcttgtc tcaagaatta atgtgcttgt 600
caacaatact ccgtgctatg atgtcctaag aactgaaaca tccatttata tgtatatccc 660

agaccattga cttgctctgc ctaaattttg tatatattttt actacaaaga tgtgatgggtg 720
 tgaaatccag aatatttttta tcgaaaaaaa aaaaaaaaaa aaaaaaaaag 770

<210> 28
 <211> 145
 <212> PRT
 <213> Oryza sativa

<400> 28
 Met Val His Gly Lys Leu Glu Val Leu Leu Val Cys Ala Lys Gly Leu
 1 5 10 15
 Glu Asp Thr Asp Phe Leu Asn Asp Met Asp Pro Tyr Val Ile Leu Thr
 20 25 30
 Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Lys Gly Ala Gly Ser
 35 40 45
 Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Asp Asp Val
 50 55 60
 Pro Gln Leu Asn Val Lys Ile Met Asp Ser Asp Ala Phe Ser Ala Asp
 65 70 75 80
 Asp Phe Val Gly Glu Ala Asn Ile Pro Leu Glu Pro Val Phe Leu Glu
 85 90 95
 Gly Ser Leu Pro Pro Ala Val His Arg Val Val Lys Glu Glu Lys Tyr
 100 105 110
 Cys Gly Glu Ile Lys Val Ala Leu Thr Phe Thr Pro Ala Ala Glu Thr
 115 120 125
 Arg His His His Asn His Glu Asn Glu Gly Glu Gly Tyr Ser Ser Trp
 130 135 140

Asn
 145

<210> 29
 <211> 958
 <212> DNA
 <213> Glycine max

<400> 29
 gcacagaaag aaaaaagttg gatccagcca aattccagct ccaatttgta actcaactgct 60
 tcaggcattt ctggcacaat tttttccacc tttatttcaa ctttaagact ccacagaaag 120
 aagcatattc ctgagtcaaa tagttctgtc catatagaat ttgtgaagtg agagtccaac 180
 ctttcatttt caattttcaa agatgcctcg tggaacactt gaagttgttc tgatcagcgc 240
 caaaggaatc gatgacaatg attttctctc cagcatagat ccttatgtga ttctcacata 300
 cagggcacag gagaaaaaga gcaactgtgca agaagatgct ggatccaagc cacaatggaa 360
 tgagagcttt cttttcactg tctctgacag tgcttctgaa cttaatctga agataatgga 420
 taaagacaac tttagtcaag atgattgtct tggcgaggca accattcatt tagatccagt 480
 gtttgaagcc ggtagcattc cagaaactgc ttacaagggt gtgaaggacg aagaatattg 540
 tggtagagatt aagggtggctc tcactttcac tgctgagaga aatgaggagc agggttatga 600
 tgcacctgaa gagagctatg gtggatggaa agaattccagt ggggaatatt aaagtgaag 660
 aagaatttac atacttcaat ggccagactt acctttataa tgaaaaataa gcagttttgg 720
 tgtcactctt aggcaatttc cattattgtg ttttctggtg tgaagatcca atagtgttgt 780
 gcttttaggt tgcattcctc cctttggata ttaaagtaca ttatgcttga tatattatct 840

tttatgcatc agttaaacat tagaagagca gtgctatattt atttaaaaaa aaaaaaaaaa 900
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 958

<210> 30
 <211> 149
 <212> PRT
 <213> Glycine max

<400> 30
 Met Pro Arg Gly Thr Leu Glu Val Val Leu Ile Ser Ala Lys Gly Ile
 1 5 10 15

Asp Asp Asn Asp Phe Leu Ser Ser Ile Asp Pro Tyr Val Ile Leu Thr
 20 25 30

Tyr Arg Ala Gln Glu Lys Lys Ser Thr Val Gln Glu Asp Ala Gly Ser
 35 40 45

Lys Pro Gln Trp Asn Glu Ser Phe Leu Phe Thr Val Ser Asp Ser Ala
 50 55 60

Ser Glu Leu Asn Leu Lys Ile Met Asp Lys Asp Asn Phe Ser Gln Asp
 65 70 75 80

Asp Cys Leu Gly Glu Ala Thr Ile His Leu Asp Pro Val Phe Glu Ala
 85 90 95

Gly Ser Ile Pro Glu Thr Ala Tyr Lys Val Val Lys Asp Glu Glu Tyr
 100 105 110

Cys Gly Glu Ile Lys Val Ala Leu Thr Phe Thr Ala Glu Arg Asn Glu
 115 120 125

Glu Gln Gly Tyr Asp Ala Pro Glu Glu Ser Tyr Gly Gly Trp Lys Glu
 130 135 140

Ser Ser Gly Glu Tyr
 145

<210> 31
 <211> 695
 <212> DNA
 <213> Triticum aestivum

<400> 31
 gcacgaggag agatccaaga ctaggccggc cggccggagg agatcgagaa ggaggaggag 60
 acatggtgcg cgggaagctg gaggtgctgc tcgtctccgc caagggcctc gacgactccg 120
 atttcttcaa tagcatggac ccgtacgtga tcttcacctg ccgcagccac gagcagaaga 180
 gcaccgtcgc atcaggagca gggagcgagc ctgagtggaa cgagaccttc gtcttcgccc 240
 tctccggcga cgctccggag ctccagggtca agatcatgga cagcgacgcc ctctcggccg 300
 acgacctcgt cggagaagca tgtatcccgc tggaggctgt gctccaggag ggcagcctgc 360
 cgccggccgt gcaccgggtc gtcaaggacg aggagtaccg cggggagatc aagatcgcgc 420
 tcaccttcac cccggcagag gaaaacgagg aggaggagga gagctacggc ggctggaatc 480
 agtccacctg aaaaaggcca gcgagccagc aagatggtgc tgtatgtctg actgtcataa 540
 tggatagaaa ggcttttgat atccttgatg tgtgtgacag acagggcatt caggaaaacg 600
 agtaaaaata ggggaaatat gtatcgatgc atgcatgaag tactaatcaa gcaattcacc 660
 gcatcgtttt gtattgcaaa aaaaaaaaaa aaaaaa 695

<210> 32
 <211> 142

<212> PRT
 <213> Triticum aestivum

<400> 32
 Met Val Arg Gly Lys Leu Glu Val Leu Leu Val Ser Ala Lys Gly Leu
 1 5 10 15
 Asp Asp Ser Asp Phe Phe Asn Ser Met Asp Pro Tyr Val Ile Leu Thr
 20 25 30
 Cys Arg Ser His Glu Gln Lys Ser Thr Val Ala Ser Gly Ala Gly Ser
 35 40 45
 Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Ala Val Ser Gly Asp Ala
 50 55 60
 Pro Glu Leu Arg Val Lys Ile Met Asp Ser Asp Ala Leu Ser Ala Asp
 65 70 75 80
 Asp Leu Val Gly Glu Ala Cys Ile Pro Leu Glu Ala Val Leu Gln Glu
 85 90 95
 Gly Ser Leu Pro Pro Ala Val His Arg Val Val Lys Asp Glu Glu Tyr
 100 105 110
 Arg Gly Glu Ile Lys Ile Ala Leu Thr Phe Thr Pro Ala Glu Glu Asn
 115 120 125
 Glu Glu Glu Glu Glu Ser Tyr Gly Gly Trp Asn Gln Ser Thr
 130 135 140

<210> 33
 <211> 617
 <212> DNA
 <213> Zea mays

<220>
 <221> unsure
 <222> (421)

<400> 33
 cacgccgcct ccatgtgggt ggggaggcaa acgogttcgt ccatctctga aactcaaacg 60
 ccttgatttg gagcatacta caggagtact tctgtacaaa tataaatacc cctggcgagt 120
 tgggttgggt ctatctcgca atcgaggcgt tttttttctg cttcgtaagt tcgtggtcga 180
 tccagcgagc gagcgagcag accggcggcc aaccgcggag ggagagatgg cgcaggggac 240
 gctggagggtg cttctcgctg gagccagggg cctcgagaac accgattacc tgagcaacat 300
 ggaccacctac gcgcttctgc aatgtcgctc ccacgagcag aagagcagcg tcgcatctgg 360
 caaaggctgt gaacctgagt ggaacgagac cttcgtgttc accgtctcca acggcgacac 420
 ngagctgttc atcaagctcc tggacagtga cgggtggcact gatgacgatt ttgttggtga 480
 agcaacgatt cctctggaag ccagttttaca cggaaggaa gcattccttc cgactgttta 540
 caatgttggtg aaagacgaag aataccgcgg agaaatcaaa gttggcctca cgttcaactcc 600
 agaggtaaac catctca 617

<210> 34
 <211> 202
 <212> PRT
 <213> Zea mays

<220>
 <221> UNSURE
 <222> (140)

 <400> 34
 Thr Pro Pro Pro Cys Gly Trp Gly Gly Lys Arg Val Arg Pro Ser Leu
 1 5 10 15
 Lys Leu Lys Arg Leu Val Leu Glu His Thr Thr Gly Val Leu Leu Tyr
 20 25 30
 Lys Tyr Lys Tyr Pro Trp Arg Val Gly Leu Gly Leu Ser Arg Asn Arg
 35 40 45
 Gly Val Phe Phe Leu Leu Arg Lys Phe Val Val Asp Pro Ala Ser Glu
 50 55 60
 Arg Ala Asp Arg Arg Pro Thr Ala Glu Gly Glu Met Ala Gln Gly Thr
 65 70 75 80
 Leu Glu Val Leu Leu Val Gly Ala Arg Gly Leu Glu Asn Thr Asp Tyr
 85 90 95
 Leu Ser Asn Met Asp Pro Tyr Ala Leu Leu Gln Cys Arg Ser His Glu
 100 105 110
 Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Cys Glu Pro Glu Trp Asn
 115 120 125
 Glu Thr Phe Val Phe Thr Val Ser Asn Gly Ala Xaa Glu Leu Phe Ile
 130 135 140
 Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp Asp Phe Val Gly Glu
 145 150 155 160
 Ala Thr Ile Pro Leu Glu Ala Ser Leu His Gly Lys Glu Ala Phe Leu
 165 170 175
 Pro Thr Val Tyr Asn Val Val Lys Asp Glu Glu Tyr Arg Gly Glu Ile
 180 185 190
 Lys Val Gly Leu Thr Phe Thr Pro Glu Val
 195 200

<210> 35
 <211> 544
 <212> DNA
 <213> Zea mays

<220>
 <221> unsure
 <222> (415)

<220>
 <221> unsure
 <222> (478)

<220>
 <221> unsure
 <222> (494)

<220>
 <221> unsure
 <222> (509)

<220>
 <221> unsure
 <222> (515)

<220>
 <221> unsure
 <222> (531)..(532)

<220>
 <221> unsure
 <222> (542)

<400> 35
 gttcgttcac gccacaggca aggcacaggg gcttgtgagg gagagcgagg agcggaggag 60
 gacatgggtgc acgggacgct ggaagtgctg ctogttgggg ccaagggcct cgagaacacc 120
 gattacctct gtaacatgga tccgtatgca attctcaagt gccgttcaca ggagcagaag 180
 agcagtattg caactggaaa aggaactacc cctgagtgga atgaaaactt tatcttcact 240
 gtgtctgacc ggacaacaga cttggtaatc aagcttatgg acagtgatac aggcacagca 300
 gatgactttg ttggtgaagc aacgattcca ttggaagcag tgtatactga aaggagcatt 360
 ccaccaacac tctataatgt tgtgaaagggt gaaaaatact gcgggggaaat caaantgggc 420
 tcacattcac tcttgaggat actcgcaagc ggggtctccaa aggacttcgt ggtggaanca 480
 tcattcttaag ctantcttta gggtcacana cacanacaaa tcatcgcttg nncctcaccg 540
 tnat 544

<210> 36
 <211> 130
 <212> PRT
 <213> Zea mays

<220>
 <221> UNSURE
 <222> (118)

<400> 36
 Met Val His Gly Thr Leu Glu Val Leu Leu Val Gly Ala Lys Gly Leu
 1 5 10 15
 Glu Asn Thr Asp Tyr Leu Cys Asn Met Asp Pro Tyr Ala Ile Leu Lys
 20 25 30
 Cys Arg Ser Gln Glu Gln Lys Ser Ser Ile Ala Thr Gly Lys Gly Thr
 35 40 45
 Thr Pro Glu Trp Asn Glu Asn Phe Ile Phe Thr Val Ser Asp Arg Thr
 50 55 60
 Thr Asp Leu Val Ile Lys Leu Met Asp Ser Asp Thr Gly Thr Ala Asp
 65 70 75 80
 Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Val Tyr Thr Glu
 85 90 95
 Arg Ser Ile Pro Pro Thr Leu Tyr Asn Val Val Lys Gly Glu Lys Tyr
 100 105 110

Cys Gly Glu Ile Lys Xaa Gly Leu Thr Phe Thr Pro Glu Asp Thr Arg
 115 120 125

Lys Arg
 130

<210> 37
 <211> 459
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (435)

<400> 37
 gccgagcttt ccattttttca actcctagtc ctatacatatc agcgggaaccc cgggggctcgg 60
 atcggatcta cagcaattag tctcgacctt cagtcgtgcc gcctgctcat cagcatataa 120
 ttcttgatcg agcgaagcggg agaggaaggg gagatcaggg cgggagagaa gatggcgag 180
 gggacgctgg aggtgctgct cgtgggagcc aagggcctcg agaaccacca ctacctctgc 240
 aacatggacc cgtacgcggg tctaaaatgc acctcgagg agcaaaagag caccgtcgcc 300
 tctgaaagg gaagtgatcc tgagtgaac gaaacctttg tgttcaccgt ctctgagaat 360
 gcaactgagc ttgtcatcaa gctactggac agtgatggg gcacggacga cgacagcggt 420
 ggtgaagcaa cgatncattg gatggagtgt acactgaag 459

<210> 38
 <211> 87
 <212> PRT
 <213> Triticum aestivum

<400> 38
 Met Ala Gln Gly Thr Leu Glu Val Leu Leu Val Gly Ala Lys Gly Leu
 1 5 10 15

Glu Asn Thr Asp Tyr Leu Cys Asn Met Asp Pro Tyr Ala Val Leu Lys
 20 25 30

Cys Thr Ser Gln Glu Gln Lys Ser Thr Val Ala Ser Gly Lys Gly Ser
 35 40 45

Asp Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Glu Asn Ala
 50 55 60

Thr Glu Leu Val Ile Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp
 65 70 75 80

Asp Ser Val Gly Glu Ala Thr
 85

<210> 39
 <211> 417
 <212> DNA
 <213> Oryza sativa

<400> 39
 atcgtcaact cagctcctct cttttcttccc ctcccccgct cctccggag acgacccggc 60
 cccgtagcca tccatgtoga tacaaggcca gatcctcgaa gtcagagtca ctgggtgcag 120
 gaagctgagg gacacggagt tcttcacggc gcaggatccc tacgtctgca tcgagtatgc 180
 caccaacaag ttccgcaccc gcacctgcac cgatggggga aggaacctta cttttgacga 240
 gaagtttcat atacctctca ttgagggggt tcgtgagcta accgtcacag tgtggaacag 300

caacacgctc acccatgatg atttcattgg caatggcagg gtgcaagctg cataaggtgc 360
 ttacgcgtgg ctatgatgat gcctcaaggg ccctccagac acgccatatg aggtctg 417

<210> 40
 <211> 83
 <212> PRT
 <213> Oryza sativa

<400> 40
 Leu Glu Val Arg Val Thr Gly Cys Arg Lys Leu Arg Asp Thr Glu Phe
 1 5 10 15
 Phe Thr Arg Gln Asp Pro Tyr Val Cys Ile Glu Tyr Ala Thr Asn Lys
 20 25 30
 Phe Arg Thr Arg Thr Cys Thr Asp Gly Gly Arg Asn Pro Thr Phe Asp
 35 40 45
 Glu Lys Phe His Ile Pro Leu Ile Glu Gly Leu Arg Glu Leu Thr Val
 50 55 60
 Thr Val Trp Asn Ser Asn Thr Leu Thr His Asp Asp Phe Ile Gly Asn
 65 70 75 80

Gly Arg Val

<210> 41
 <211> 550
 <212> DNA
 <213> Glycine max

<220>
 <221> unsure
 <222> (534)

<400> 41
 ggtgaattgc aatttcaatt aattagaatt caacgtttgc aaattgcata ttgttcttct 60
 ctctctctct tctcttgact ccatgtcgtc gataacgggc atccagggcc aacctcttga 120
 ggttacgggtg gtttcgtgct ccaagttgaa ggacacagaa tggatttcaa ggcaagatcc 180
 gtacgtttgt gttgagtatg gcagcacaac gttccgaacc agaacctgca cagacggcgg 240
 aaaaaatccg gtattccaag agaagttcat ctccccctc attgaaggcc ttcgggagct 300
 caatgtcctt gtttgaaca gcaatactct caccttggac gattttatag gaagcggaaa 360
 gattcaattg cacaagggtc tctctcaagg ctccgatgac tctgcttggc cacttcagac 420
 caaaactggc agatacgtg gtgaagtcaa agtcatattg cattacgcaa ttgcaaatca 480
 tcaaaggcat aaatcagtgt caagccatgc tccatcaaca cctccgtatg tggnaacaac 540
 aactcctccc 550

<210> 43
 <211> 424
 <212> DNA
 <213> Zea mays

<220>
 <221> unsure
 <222> (169)..(170)

<220>
 <221> unsure
 <222> (172)..(173)

<220>
 <221> unsure
 <222> (178)..(179)..(180)

<220>
 <221> unsure
 <222> (183)

<400> 43
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 cgccacctgg aggagaggac agcgcgccag ggagggggag gaggaagaag aacatgggga 120
 agggcgctcct gaaggtgcac ctcgtegacg ccaaggggct ctccggcann gnnttctnnn 180
 ggnagctgga cccctacgtg atcatgcagt accggagcca ggagcgcaag agcagcgctcg 240
 cccgagacca aggaaggaac ccgtgctgga acgaggtgtt caagttccag atcaactcgg 300
 ccgcggccaa cgtgcagcac aagctcatcc tccggatcat ggaccacgac aacttctcca 360
 gcgacgactt ctgggcgagg cgacgatoga cgtgacggac atcgtcagcc tgggcgccga 420
 gcgc 424

<210> 44
 <211> 85
 <212> PRT
 <213> Zea mays

<220>
 <221> UNSURE
 <222> (18)..(19)

<220>
 <221> UNSURE
 <222> (21)..(22)..(23)

<400> 44
 Gly Lys Gly Val Leu Lys Val His Leu Val Asp Ala Lys Gly Leu Ser
 1 5 10 15
 Gly Xaa Xaa Phe Xaa Xaa Xaa Leu Asp Pro Tyr Val Ile Met Gln Tyr
 20 25 30
 Arg Ser Gln Glu Arg Lys Ser Ser Val Ala Arg Asp Gln Gly Arg Asn
 35 40 45
 Pro Cys Trp Asn Glu Val Phe Lys Phe Gln Ile Asn Ser Ala Ala Ala
 50 55 60
 Asn Val Gln His Lys Leu Ile Leu Arg Ile Met Asp His Asp Asn Phe
 65 70 75 80
 Ser Ser Asp Asp Phe
 85

<210> 45
 <211> 548
 <212> DNA
 <213> Glycine max

<220>
 <221> unsure
 <222> (291)

<220>
<221> unsure
<222> (349)

<220>
<221> unsure
<222> (417)

<220>
<221> unsure
<222> (437)

<220>
<221> unsure
<222> (446)

<220>
<221> unsure
<222> (486)

<220>
<221> unsure
<222> (492)

<220>
<221> unsure
<222> (506)

<220>
<221> unsure
<222> (525)

<220>
<221> unsure
<222> (528)

<220>
<221> unsure
<222> (544)

<400> 45
ttaaattgta agaattttgc tgacttgtaa gcttcagaga cgaagacaca cggtttagagt 60
gagaaagaga tggcaattgg gttcatggag gtgcagcttg tgaaagcaaa ggagtttgtgt 120
gacactgatt tctttggttag tatggaccgc tatgttgtga tacaatacaa cggccaagag 180
caaaggagta gtgttgctaa gggacagggc aataatccgg tatggaatga gaaatttgtg 240
ttcaaggtag aatatacctac actgagtaat tcatacaaga ttatctttaa natcatggac 300
aaggatcttt tatctgcaga tgactttggt ggtcaagcca tagtcctang tgggaagatt 360
tattagccat aaggggtaga ggatgggtgcc ggctgagcta caacctccta aagtacnaga 420
gtaattccgt gcagatnaat cttantggt ggagaaattg atcttgggat aactttttaa 480
gggggnaaga angagttcaa tggagnaago ctaaaccaag gatcnaangg acagtaaatt 540
agtnnttc 548

<210> 46
<211> 89
<212> PRT
<213> Glycine max

<220>
<221> UNSURE
<222> (71)

<400> 46
 Gly Phe Met Glu Val Gln Leu Val Lys Ala Lys Glu Leu Cys Asp Thr
 1 5 10 15
 Asp Phe Phe Gly Ser Met Asp Pro Tyr Val Val Ile Gln Tyr Asn Gly
 20 25 30
 Gln Glu Gln Arg Ser Ser Val Ala Lys Gly Gln Gly Asn Asn Pro Val
 35 40 45
 Trp Asn Glu Lys Phe Val Phe Lys Val Glu Tyr Pro Thr Leu Ser Asn
 50 55 60
 Ser Tyr Lys Ile Ile Leu Xaa Ile Met Asp Lys Asp Leu Leu Ser Ala
 65 70 75 80
 Asp Asp Phe Val Gly Gln Ala Ile Val
 85

<210> 47
 <211> 473
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (296)

<220>
 <221> unsure
 <222> (473)

<400> 47
 tccaaacgcg acctcatcag agcaagaccc ggaggaaaca aggagaggcc agagcggcct 60
 gtcacaaggc aaggacagag gaggtgcttg ttcaggtctc ctgctagatc cggaggcgat 120
 gggcaggggc tgctggaggt gcatctcgtc gacgccaagg gcctcttcgg cagcgatttc 180
 ctaggaagat cgaccggtat gtaatcgtgc aataccggag ccaggagcgc aagagcagca 240
 ctccagagat gaggggagga acccgagctg gaacgaggtg ttccgggttc agatcnctcc 300
 tctgcggccca acgggcagca caagctcttc ctccggatca tggaccaoga catcttctcc 360
 agcgacgact tctcggcca agcgacgata aacgtgaccg atctgatcag accggcatgg 420
 agaagcgggc gcgtcgcagc tgaacgcggc aaagtacaac gttgttgtcc gcn 473

<210> 48
 <211> 99
 <212> PRT
 <213> Triticum aestivum

<220>
 <221> UNSURE
 <222> (24)

<220>
 <221> UNSURE
 <222> (47)

<220>
 <221> UNSURE
 <222> (62)

<400> 48

Gly Gln Gly Leu Leu Glu Val His Leu Val Asp Ala Lys Gly Leu Phe
1 5 10 15

Gly Ser Asp Phe Leu Gly Arg Xaa Asp Pro Tyr Val Ile Val Gln Tyr
20 25 30

Arg Ser Gln Glu Arg Lys Ser Ser Thr Pro Glu Met Arg Gly Xaa Gly
35 40 45

Glu Glu Pro Glu Leu Glu Arg Gly Val Pro Val Pro Asp Xaa Ser Ser
50 55 60

Ala Ala Asn Gly Gln His Lys Leu Phe Leu Arg Ile Met Asp His Asp
65 70 75 80

Ile Phe Ser Ser Asp Asp Phe Leu Gly Gln Ala Thr Ile Asn Val Thr
85 90 95

Asp Leu Ile

<210> 49

<211> 465

<212> DNA

<213> Oryza sativa

<400> 49

aaagatcacc caaaacccta tattccatag ttgagacaca agattttttg aagccaagtt 60
tgcgcatcac atcaaagggt ttttttgatg cgaccaatgc tgtgaagagt gtaactagca 120
gtatctctag cgcttcaggg aagcatgtcg ctgacgatac aagagaattt gttggagagc 180
tgaacattac agtggttaaga ggtattcaag ttggccgtca gagacatgct aacgagcgat 240
ccatatgttg ttctaacact tggggagcag aaagctcaaa ccaactgttaa accgagtgac 300
ttgaaccacag tatggaatga ggtgottaag atatcaattc ctcgaaatta tggacctott 360
aaacttgaag tatacgacca tgatacgttc tctgctgatg atatcatggg ggaagcggag 420
atagatcttc aaccaatgat cacagccgtc atggcctttg gagaa 465

<210> 50

<211> 31

<212> PRT

<213> Oryza sativa

<400> 50

Val Val Leu Thr Leu Gly Glu Gln Lys Ala Gln Thr Thr Val Lys Pro
1 5 10 15

Ser Asp Leu Asn Pro Val Trp Asn Glu Val Leu Lys Ile Ser Ile
20 25 30

<210> 51

<211> 390

<212> DNA

<213> Oryza sativa

<220>

<221> unsure

<222> (43)

<220>
<221> unsure
<222> (204)

<220>
<221> unsure
<222> (301)

<220>
<221> unsure
<222> (347)

<220>
<221> unsure
<222> (373)

<400> 51
gcctgtgcaa catcatcatc aagaagaaga agagatcaac ggnaagaaga ctagcgacta 60
gcgagagatc gatcgaagag aagaggagag atggtgcacg ggaagctgga ggtcctcctc 120
gtctgcgcca agggcctcga ggacactgac ttcttgaacg acatggaccc ctacgtgac 180
ctcacctgcc gcactcagga gcangaaaag cagcgttgca aaaggagcag gaagcgagcc 240
tgaatggaac gagaccttcg tcttcaccgt ctccgaagat gttccacagc tcaatgtcaa 300
ngatcatgga caagtgatgg ccttctcaag ctgacgattt cggtcnnggt gaagcaaaca 360
attcctctgg gangcctgtg ttcttgggaa 390

<210> 52
<211> 69
<212> PRT
<213> Oryza sativa

<400> 52
Met Val His Gly Lys Leu Glu Val Leu Leu Val Cys Ala Lys Gly Leu
1 5 10 15
Glu Asp Thr Asp Phe Leu Asn Asp Met Asp Pro Tyr Val Ile Leu Thr
20 25 30
Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Lys Gly Ala Gly Ser
35 40 45
Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Asp Asp Val
50 55 60
Pro Gln Leu Asn Val
65

<210> 53
<211> 489
<212> DNA
<213> Glycine max

<220>
<221> unsure
<222> (417)

<220>
<221> unsure
<222> (428)

<220>
 <221> unsure
 <222> (452)

<220>
 <221> unsure
 <222> (482)

<400> 53
 agaaagaaaa aagtggatcc agccaaattc cagctccaat ttgtaactca ctgcttcagg 60
 cttttctggc acaatttttt ccacctttat ttcaacttta agactccaca gaaagaagca 120
 tattcctgag tcaaatagtt ctgtccatat agaatttggt aagtgagagt ccaacctttc 180
 attttcaatt ttcaaagatg cctogtggaa cacttgaagt tgttctgata agcgccaaag 240
 gaatcgatga caatgatttt ctctccagca tagatcctta tgtgattctc acatacaggg 300
 cacaggagaa aaagagcact gtgcaagaaa gatgctggat ccaagccaca atggaatgag 360
 agctttcttt tcaactgtctc tgacagtgtc tctgaactta atctgaagat aatgggntaa 420
 agacaacntt agtcaaagat ggttggcctg gngaggggaa caatcaatta gattcaagtg 480
 gnttggagg 489

<210> 54
 <211> 42
 <212> PRT
 <213> Glycine max

<400> 54
 Met Pro Arg Gly Thr Leu Glu Val Val Leu Ile Ser Ala Lys Gly Ile
 1 5 10 15
 Asp Asp Asn Asp Phe Leu Ser Ser Ile Asp Pro Tyr Val Ile Leu Thr
 20 25 30
 Tyr Arg Ala Gln Glu Lys Lys Ser Thr Val
 35 40

<210> 55
 <211> 523
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (401)

<220>
 <221> unsure
 <222> (407)

<220>
 <221> unsure
 <222> (449)

<220>
 <221> unsure
 <222> (456)..(457)

<220>
 <221> unsure
 <222> (493)

<220>
 <221> unsure
 <222> (497)

<220>
 <221> unsure
 <222> (512)

<400> 55
 gagagatcca agactaggcc ggccggccgg aggagatcga gaaggaggag gagacatggt 60
 gcgcggggaag ctggaggtgc tgctcgtctc cgccaagggc ctcgacgact ccgatttctt 120
 caatagcatg gacccgtaag tgatcctcac ctgccgcagc cagcagcaga agagcacagt 180
 cgcatacagga gcagggagcg agcctgagtg gaacgagacc ttctgtcttcg ccgtctccgg 240
 cgacgctccg gagctcaggg tcaagatcat ggacagcgac gccctctcgg ccgacgacct 300
 cgtcggagaa gcatgtatcc cgctggaggc tgtgctccag gagggcagcc tgccgcgggc 360
 cgtgcaccgg gtctcaagga cgaggagtac cgcggggaat naagatngcg ctcaattcac 420
 ccggcagagg aaaacaggag gaggaggana ctacgnnggt ggatcatcac tgaaaaggca 480
 cgagcacaaa tgngttnttt acgtaaaagg anaaaggttt gat 523

<210> 56
 <211> 28
 <212> PRT
 <213> Triticum aestivum

<400> 56
 Met Val His Gly Lys Leu Glu Val Leu Leu Val Ser Ala Lys Gly Leu
 1 5 10 15

Glu Asp Thr Asp Phe Leu Asn Asn Met Asp Pro Phe
 20 25